

REMARKS

As explained below, the primary reference upon which the examiner relied when rejecting the pending claims, i.e., Doczy et al., is not prior art against which those claimed methods may be evaluated. For that reason, applicants respectfully request the examiner to allow claims 9-16 to issue.

Rejection Under 35 U.S.C. §102(b) Based on Lin

The examiner rejected claims 1-4 and 6-8 under 35 U.S.C. §102(b) as being anticipated by Lin et al. Applicants have canceled claims 1-4 and 6-8, obviating the need to respond to this rejection.

Rejections Under 35 U.S.C. §103(a) Based on Lin

The examiner rejected claim 5 under 35 U.S.C. §103(a) as being unpatentable over Lin et al. in view of Kim et al. Applicants have canceled claim 5, obviating the need to respond to this rejection.

The examiner rejected claims 9-12 under 35 U.S.C. §103(a) as being unpatentable over Doczy et al. in view of Rotondaro et al., rejected claims 13, 15 and 16 under 35 U.S.C. §103(a) as being unpatentable over Doczy et al. in view of Rotondaro et al. and Lin et al., and rejected claim 14 under 35 U.S.C. §103(a) as being unpatentable over Doczy et al., Rotondaro et al., and Lin et al. further in view of Kim et al.

The examiner cannot rely upon Doczy et al. to support the rejection of claims 9-16 under 35 U.S.C. §103(a). Both Doczy et al. and the pending

application were, at the time the invention was made, subject to an obligation of assignment to the same "person" – namely Intel Corporation. (See Seeley Declaration ¶2.) 35 U.S.C. §103(c) provides:

Subject matter developed by another person, which qualifies as prior art only under one or more of subsections (e), (f), and (g) of section 102 of this title, shall not preclude patentability under this section where the subject matter and the claimed invention were, at the time the invention was made, owned by the same person or subject to an obligation of assignment to the same person.

Because Doczy et al. and the inventions of claims 9-16 were, at the time the inventions were made, subject to an obligation of assignment to the same "person", the examiner cannot rely upon Doczy et al. to support a rejection of those claims under 35 U.S.C. §103(a).

The examiner cannot reconstruct the methods of claims 9-16 by selecting various features from the other cited references and piecing them together.

Each of those methods require: (1) removing a first polysilicon layer to form a trench; (2) forming a metal layer within the trench; and (3) converting a p-type polysilicon layer to a silicide. Lin describes removing dummy gates 50, and replacing them with gate dielectric layer 60 upon which is formed metal layer 62. Silicon ions (or silicon ions of different doses) are implanted into part (or parts) of metal layer 62. An anneal step is then performed to form a silicide from the silicon-implanted metal.

Lin does not describe converting a p-type polysilicon layer into a silicide. Instead, Lin describes replacing dummy gates with a metal layer, implanting silicon ions into the metal layer, then forming a silicide from that silicon-implanted metal. Nor does Lin offer any teaching or suggestion that would have motivated one skilled in the art to substitute the claimed method, which specifies converting a p-type polysilicon layer into a silicide, for Lin's process, which teaches to remove any polysilicon containing dummy gate prior to replacing it with a metal silicide. Given the absence of any such teaching or suggestion, applicants' claimed methods could not have been obvious in view of Lin.

Rotondaro describes depositing a first metal on part of a silicon layer, then forming a metal-1 silicide from those materials. A metal 2 is deposited on another part of the silicon layer, then converted into a metal 2 silicide. Rotondaro does not remove a first polysilicon layer to form a trench, or form a metal layer within such a trench, as applicants' claimed methods require. Nor does Rotondaro describe converting a p-type polysilicon layer into a silicide. Moreover, Rotondaro does not offer any teaching or suggestion that would have motivated one skilled in the art to substitute the claimed method for Rotondaro's process. Consequently, applicants' claimed methods could not have been obvious in view of Rotondaro.

Because Doczy et al. lacks prior art status with respect to the methods of pending claims 9-16, and because the claimed methods cannot be generated by

combining various elements from the remaining cited references, applicants respectfully request the examiner to withdraw the pending rejections of those claims and to allow them to issue.

Respectfully submitted,

Date: March 28, 2005


Mark Seeley
Reg. No: 32,299
ATTORNEY FOR APPLICANTS

Intel Corporation
Mail Stop SC4-202
2200 Mission College Blvd.
Santa Clara, CA 95052-8119
(408) 765-7382

FIRST CLASS CERTIFICATE OF MAILING

(37 C.F.R. § 1.8(a))

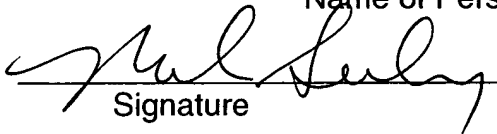
I hereby certify that this correspondence is being deposited with the United States Postal Service as First Class mail with sufficient postage in an envelop addressed to the Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on

March 28, 2005

Date of Deposit

Mark Seeley

Name of Person Mailing Correspondence


Signature

March 28, 2005
Date